

CLAIMS:

1. A noise reduction circuit, the noise reduction circuit comprising:
 - a filter coupled to a gate of a current source for an oscillating circuit to filter a bias noise component into the gate; and
 - a degeneration circuit coupled to a supply for the current source, wherein the degradation circuit reduces a gain within the current source.
2. The circuit of claim 1, wherein the filter comprises a resistance.
3. The circuit of claim 1, wherein the filter comprises a capacitance.
4. The circuit of claim 1, wherein the current source comprises a diode.
5. The circuit of claim 1, wherein the current source comprises a p-channel metal oxide semiconductor.
6. The circuit of claim 1, wherein the degeneration circuit comprises a resistance.

7. The circuit of claim 1, wherein the filter comprises a low pass filter.
8. The circuit of claim 7, wherein the filter is coupled to a current mirror circuit to generate a bias current comprising the bias noise component.
9. The circuit of claim 7, wherein the degeneration circuit reduces a supply noise component.
10. A system for reducing noise in an oscillating circuit, the system comprising:
 - a filtering device having a first resistance and a capacitance to filter a bias current and coupled to a gate of a current source; and
 - a degeneration device having a second resistance to reduce a noise component in a supply current at the current source.
11. The system of claim 10, further comprising a band gap reference circuit to generate the bias current.
12. The system of claim 10, further comprising a power supply to generate the supply current.

13. The system of claim 10, wherein the second resistance comprises a resistor.
14. The system of claim 10, wherein the filtering device comprises a low pass filter.
15. The system of claim 14, wherein the low pass filter comprises a resistor.
16. The system of claim 14, wherein the low pass filter comprises a capacitor.
17. The system of claim 10, wherein the current source comprises diode.
18. The system of claim 17, wherein the first semiconductor type comprises a p-channel metal oxide semiconductor.
19. A method for reducing noise, the method comprising:
filtering a bias noise component from a bias current flowing into a gate of a current source for an oscillating circuit; and
reducing a supply noise component from a supply current flowing into a supply of the current source.

20. The method of claim 19, wherein the filtering step comprises filtering the bias current using a low pass filter.
21. The method of claim 19, wherein the reducing step comprises reducing the supply noise component using a degeneration circuit.
22. The method of claim 19, further comprising reducing a gain of the current source.
23. The method claim 19, further comprising impeding a signal from the supply of the current source using a degeneration circuit.
24. A method for reducing noise components, the method comprising:
- reducing a bias noise component by passing a bias current through a noise reduction circuit coupled to a gate of a current source to an oscillating circuit; and
 - reducing a supply noise component by passing a supply current through the noise reduction circuit coupled to a supply of the current source.
25. The method of claim 24, further comprising generating an input current by the current source to control the oscillating circuit.

26. The method of claim 24, wherein the first reducing step comprises reducing the bias noise component by filtering the bias current with a filter within the noise reduction circuit.

27. The method of claim 24, wherein the second reducing step comprises reducing the supply noise component by passing the supply current through a degeneration circuit within the noise reduction circuit.

28. A circuit comprising:
an oscillating circuit to generate an output signal;
a current source to control the oscillating circuit, wherein the current source receives a signal derived from a reference signal to generate the output signal; and
a noise reduction circuit coupled to a gate and a supply of the current source to reduce a noise component within the signal.

29. The circuit of claim 28, wherein the noise reduction circuit comprises a filter coupled to the gate.

30. The circuit of claim 28, wherein the noise reduction circuit comprises a degeneration circuit coupled to the supply.

31. A circuit for reducing noise, the circuit comprising:

filtering means for filtering a bias noise component from a bias current flowing into a gate of a current source for an oscillating circuit; and
reducing means for reducing a supply noise component from a supply current flowing into a supply of the current source.

32. A circuit for reducing noise components, the circuit comprising:

first reducing means for reducing a bias noise component by passing a bias current through a noise reduction circuit coupled to a gate of a current source to an oscillating circuit; and

second reducing means for reducing a supply noise component by passing a supply current through the noise reduction circuit coupled to a supply of the current source.